

# FILE NOTATIONS

Entered in NID File

Entered On S R Sheet

Location Map Pinned

Card Indexed

I W R for State or Fee Land

*Prior*  
*DBLL*

Checked by Chief

Copy NID to Field Office

Approval Letter

Disapproval Letter

## COMPLETION DATA:

Date Well Completed

Location Inspected

OW WW TA

Bond released

GW OS PA

State of Fee Land

## LOGS FILED

Driller's Log

Electric Logs (No. )

E I E-I GR GR-N Micro

Lat Mi-L Sonic Other

M E M O R A N D U M  
January 4, 1961

---

On Thursday, December 22, 1960, I visited the Ray M. Johnson, Watson Fee Wells No. 1, 2, 3 and 4, located in Sections 27 and 34, Township 9 South, Range 25 East, Uintah County, Utah.

The town of Hanna, Utah, has been obtaining culinary water from wells drilled in the bed of the White River some distance down-stream from the above abandoned oil wells. Hanna's water supply showed substantial amounts of hydrogen sulphide, and a company they retained to analyse the contamination advised them that the most common source of this contamination was abandoned oil wells leaking sulphur water. The Hanna people investigated and found that the above wells, 2, 3 and 4, were flowing some amounts of sulphur which ran directly into the White River. They secured the permission of the present owner of the land on which the wells were located to weld steel plates or plugs on top of the open casing of these three wells and had these plates welded on in the early part of December. These temporary plugs should not be considered as sufficient, and permanent plugging of the last three wells should be required.

Photographs were taken of all four wells on December 22, and are attached in the file for reference.

Well No. 1 - SW SW SW of Sec. 27, T. 9 S., R. 25 E., Uintah Co.

This well appears to be properly plugged and abandoned. It is located in the river bed and is probably surrounded by water when the river is higher. When the well was drilled, the location was some distance from the river; however, the river has evidently meandered around the well. There appeared to be several sizes of conductor pipe from approximately

20" down to approximately 10" set and cemented to the surface, and a string of 8 5/8" cemented and extending about 10 feet above the current level of the river bed. There was no sulphur water leaking from this well.

Well No. 2 - NW NW NW of Sec. 34, T. 9 S., R. 25 E., Uintah Co.

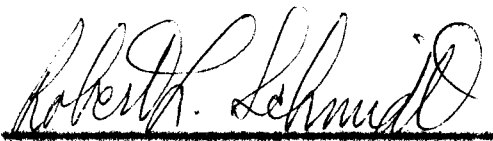
This well was originally drilled by Johnson and later deepened by Phillips. Johnson had set 7" casing at 874 1/2' with 350 sacks of cement. Phillips deepened the well and then plugged it back leaving all of the 7" casing in the hole. Since that time someone has apparently shot off and pulled some of the 7" leaving an open hole from the top of the casing stub to the bottom of the 13 3/4" surface casing set at 360'. The Drillers Log shows a sulphur water sand from 438-448', and this is evidently the source of the water which flowed to the surface after the 7" pipe was pulled. This well flowed an estimated 5 gallons per minute of sulphur water before the steel plate was welded on top of the 8 5/8" casing exposed at the surface. (We have no record of any 8 5/8" pipe in this well.)

Well No. 3 - NW SW NW of Sec. 34, T. 9 S., R. 25 E., Uintah Co.

This well was never properly plugged and has evidently been leaking for some time. We have no record of the amount or size of casing set, although it appears to have 7" casing at the surface. An electric log shows casing set at approximately 30' although we do not know whether this is the 7" or may be a larger diameter surface casing. A steel plate has been welded on top of a flange on the 7" pipe, and a 2" ball plug set in the side of the pipe. This well flowed an estimated 5 gallons per minute of sulphur water before the plate was welded.

Well No. 4 - 30 NW 1/4 of Sec. 34, T. 9 S., R. 25 E., Uintah Co.

This well was also drilled prior to the existence of the Commission and very little information is available. A shop-made bull plug is welded to the top of a collar on the 8 5/8" casing at the surface. A 2" bull plug is set in the side of the big plug. This well flowed an estimated 15 gallons of sulphur water per minute before the bull plug was installed. This well was evidently never properly plugged.

  
ROBERT L. SCHMIDT,  
CHIEF PETROLEUM ENGINEER

RLS:awg

JOHNSON-WATSON FEE # 4 WELL



(Negatives in Johnson-Watson Fee #1 File)

File Copy-  
Caldwell + Covington  
File No. 100.13-3-14-4

ROY M. JOHNSON  
WATSON FEE # 4  
SW SW NW Sec. 34, T. 9 S. R. 25 E. Uintah Co., Utah  
Elev. 5026 grd (Cable Tool)

R.E. Covington, Vernal, Utah  
Well Geologist

- 0 - 40 Sandstone, medium grain, frosted to clear, angular to sub-rounded, salt and pepper, black clay particles and trace glauconite.
- 40 - 50 Limestone, tan to buff, platy, hard, dense (3)
- 50 - 60 Limestone, tan and dark brown, as above
- 60 - 65 Limestone, brown, dark gray, finely crystalline (3) Limestone, white, chalky (1)  
Sandstone, white, quartzic, crystalline, coarse grain, with clear quartz, crystalline, slightly calcareous (1) Trace rose quartz and "oil" shale.
- 65 - 70 Limestone, dark brown and gray, dense (2) Limestone, gray, brecciated, with some ostracods (2) Shale, brown and gray, calcareous (1)
- 70 - 80 Shale, gray, calcareous with pyrite common. Trace siltstone, white, finely micaceous.
- 80 - 90 Shale, gray, calcareous, finely micaceous (4) Siltstone, gray calcareous, grading into sandstone, tight, white, medium grain calcareous (1)
- 90 - 100 Shale, as above (3) Limestone, white, ostracodal, with free white ostracods, calcitic and sharp with particles (2) Trace limestone, ostracodal, cream, slightly blue and opalized.
- 100 - 110 As above with increase in limestone, dark gray and buff, finely crystalline to 10%
- 110 - 120 Shale, dark gray, calcareous (3) Limestone, light to dark gray, finely crystalline to sucrosic (2) Dark brown limestone appears (10%)
- 120 - 130 Limestone, white, chalky, with some oolitic, brecciated limestone (4) Shale, dark gray (1)
- 130 - 140 Shale, medium to dark gray, finely micaceous (4) Limestone, white, chalky oolitic (1)
- 140 - 150 Shale, as above (2) Sandstone, white, medium fine to medium grain, sharp, with small black oolites (2) Limestone, gray, with black oolites (1) Trace limestone, buff, finely crystalline
- 150 - 160 Sandstone, light gray, very fine to fine grain, sucrosic, sharp, slightly oolitic, with some black oolites (4) Shale, light gray, soft (1).
- 160 - 220 Sandstone, as above, more friable, clean (3) Shale, dark gray (2)
- 220 - 230 Shale, gray, non-laminated to laminated (3) Sandstone, white to gray, very fine to medium fine grain, sharp, calcareous (2) Limestone, gray, coarsely crystalline and limestone, creamy, ostracodal, rare.

- 230 - 240 Sandstone, dark gray, medium grain, sharp, sucrosic (3) Shale, gray, calcareous (2)  
Limestone, brown, fragmented, common.
- 240 - 250 Limestone, creamy white with light gray and creamy ostracod (4) Shale, gray (1)  
Sandstone, gray, medium grain, sharp, common
- 250 - 260 Sandstone, white, fine grain, sucrosic, slightly micaceous, friable, Limestone,  
tan and gray, ostracodal 10%
- 260 - 270 Sandstone, gray and white, fine to medium grain, poorly sorted, silty, sucrosic  
to glassy. Shale, gray, calcareous 10%
- 270 - 300 Sandstone, as above (3) Shale, as above (2)
- 300 - 310 As above, with brown shale appearing (10%)
- 310 - 320 Shale, gray, calcareous (2) Shale, brown, fissile (2) Shale, buff (1) Sand-  
stone, as above, rare.
- 320 - 330 Shale, "oil shale", brown (4) Limestone, tan and brown, ostracodal (1) **Some**  
gray shale.
- 330 - 340 Lim stone, brown and buff, finely crystalline to sucrosic (3) Shale, medium to  
dark gray (2) Oil shale, less than 10%
- 340 - 350 Shale, gray, soft (3) Shale, brown, soft (1) Shale, dark brown, "oil shale" (1)  
Trace limestone (makes little water).
- 350 - 360 Limestone, white, chalky, algal (1) Limestone, tan, coarsely crystalline (1)  
"oil shale" dark brown, laminated (1) Shale, gray, soft (1) Sandstone, fine  
grain, very friable, clean water Sandstone (1)
- 360 - 370 Sandstone, white, medium fine grain, sucrosic, clean, friable, sharp (3)  
"oil" shale, dark brown (1) Limestone, white, chalky to tan crystalline (1)  
Trace pyrite (sulphur smell in samples)
- 370 - 380 Sandstone, white fine grain, clean, sharp, water sandstone
- 380 - 390 Sandstone, white to gray, fine to medium grain, friable, clean limestone, algal,  
white to cream, less than 5%
- 390 - 400 Sandstone, gray, very fine grain to fine grain, clean, friable (2) Shale, gray,  
(3)
- 400 - 405 Shale, gray, as above (4) Siltstone, gray, (1)
- 405 - 410 shale, gray, finely micaceous to biotitic (3) Sandstone, gray, very fine grain (2)  
Limestone, buff, finely crystalline, rare. "Oil Shale", less than 5%
- 410 - 415 Limestone, tan, ostracodal (3) Sandstone, dark gray, medium grain, glassy, tight,  
slightly pyritic (1) Shale, dark gray, finely micaceous (1) Trace limestone,  
brown and gray, ostracodal
- 415 - 420 Limestone, as above, (2) Sandstone, light to dark gray, medium grain, glassy,  
tight to loose, friable (2) Shale, gray, finely micaceous (1)
- 420 - 425 Sandstone, as above (4) Shale, dark gray (1) Limestone, as above, less than 10%

- 425 - 430 Siltstone, light gray, grading into sandstone, fine grain, glassy, tight (3) shale, dark gray (2) Limestone, ostracodal, cream and brown, 10%
- 430 - 435 Siltstone, light gray, trace pyrite limestone, as above, tan, less than 5%
- 435 - 450 Siltstone, as above (4) Shale, dark gray (1) Limestone, as above, rare Siltstone, as above
- 450 - 455 Siltstone, as above (3) Shale, light and dark gray, finely, micaceous to biotitic (2)
- 455 - 460 Shale, gray, as above (3) Limestone, light gray, sandy (2)
- 460 - 465 Siltstone, white, quartzic, grading into sandstone, white, fine grain, slightly biotitic (4) Shale, light gray (1) Slight oil show at 466 (driller)
- 465 - 470 Shale, brown (2) Shale, gray (2) Siltstone, as above (1)
- 470 - 475 Siltstone, white, sharp, grading into sandstone, fine grain (2) Shale, light gray (2) Shale, brown, soft (1)
- 475 - 480 Shale, dark gray (3) Siltstone, white, as above (2) Shale, brown, less than 10%
- 480 - 485 Shale, dark gray (3) Siltstone, white, glassy calcareous with some white sucrosic sandstone (2) Trace limestone, brown, soft.
- 485 - 490 Sandstone, white, very fine grain, calcareous (3) Shale, dark gray (2) Limestone, buff, finely crystalline, angular, appears, less than 5%
- 490 - 500 Siltstone, gray to white, with some very fine grain sandstone (3) Shale, gray, (2) Shale, brown, calcareous, less than 5%
- 500 - 510 Sandstone, white, fine grain, sucrosic, with some sandstone, gray, medium grain, glassy (3) Shale, gray (2) Limestone, buff, finely crystalline, 5% Trace limestone, white, crystalline, finely micaceous to biotite
- 510 - 520 Sandstone, white, fine grain, sharp, tight, calcareous, with shale, dark gray less than 10% Trace pyrite and limestone, buff, finely crystalline. Trace gypsum, white, tabular.
- 520 - 530 Sandstone, as above (4) Shale, as above (1)
- 530 - 550 Shale, as above (3) Sandstone, as above (2)
- 550 - 570 Shale, gray (2) Shale, tan, calcareous (2) Limestone, white and tan, laminated, varied (1) Trace limestone, white, chalky, trace pyrite. Trace Sandstone, as above
- 570 - 600 As above, with some siltstone, white to gray, calcareous, 10%
- 600 - 610 Shale, light and dark gray, calcareous (3) Siltstone, white to gray, calcareous (2) Limestone, creamy, oolitic, dense appears. Trace pyrite
- 610 - 620 Sandstone, white, friable, medium and coarse grain, very micaceous and biotitic (3) Shale, gray, as above (2) Siltstone, white to gray very common.
- 620 - 630 Shale, gray, as above (3) Sandstone, white, friable, as above (2) Limestone, light gray, dense, lithographic appears.



- 630 - 640 Shale, gray (4) Sandstone, white, fine grain, friable (1) Some siltstone, gray
- 640 - 650 Shale, gray and brown with some sandstone as above, less than 5%
- 650 - 660 As above, with some brown shaly limestone
- 660 - 670 Shale, gray (3) Shale, brown, laminated, very limey, grading into shaly limestone (2)
- 670 - 680 As above, crystalline, gypsum common
- 680 - 690 Shale, gray (4) Siltstone, gray (1)
- 690 - 700 Shale, gray and buff (3) Shale, "oil shale", brown, laminated (2) Trace limestone, buff, fine grain
- 700 - 720 Shale, light and dark gray, brown and buff (4) Shale, "oil shale" (1) Trace ganoid fish scale, 720
- 720 - 730 Shale, "oil shale" brown, laminated (3); shale gray and green (2)
- 730 - 740 Shale, "oil shale", as above (4) Shale, gray and green, as above (2) Limestone, light brown, finely crystalline, less than 5%
- 740 - 750 Shale, gray and buff, with oil shale, 10%
- 750 - 760 Shale, gray (3) Shale, brown, "oil shale" (2)
- 760 - 770 Shale, brown and gray
- 770 - 780 Shale, brown, soft
- 780 - 790 Shale, brown and tan (4) siltstone, gray (1)
- 790 - 800 Shale, gray and shale, brown, laminated (3) Shale, "oil shale", brown (1) Limestone, tan and buff, ostracodal (1) Trace resin
- 800 - 810 Shale, brown and gray and tan (3) Limestone, brown and gray ostracods (1) Shale "oil shale" (1) Trace sandstone, gray, fine grain and trace bentonite, pale blue
- 810 - 820 Shale, brown, gray and tan (2) Shale, "oil shale" (2) Limestone, brown, ostracodal slight oil staining (1) Resin common. Trace bentonite, pale blue
- 820 - 830 Shale, brown, "oil shale" (3) Shale, gray (1) Limestone, white, shaly (1)
- 830 - 840 Shale, "oil shale" (3) Limestone, gray and brown, sucrosic to finely crystalline (2) Some shale, gray
- 840 - 850 Shale, brown, gray and green (3) Limestone, brown and tan, shaly to sucrosic (2)
- 850 - 855 Siltstone, gray, waxy, ostracodal (3) Shale, gray, waxy (1) Limestone, tan and brown, finely crystalline to ostracodal, white (1).

- 855 - 865 Shale, gray (2) Siltstone, gray (2) Limestone, tan and brown (1)
- 865 - Circ. sample: Shale, gray (2) Limestone, brown (2) Siltstone, gray (1)
- 865 - 870 Shale, gray (2) Limestone, brown (2) Limestone, gray, ostracodal (1)  
Avaginite and gilsonite very common
- 872 - Circ. Sample: Siltstone increases to 20%. Limestone decreased to 10%
- 872 - 873 As above with gilsonite 5%
- 873 - 874 Limestone increases to 40%, tan and brown
- 874 - 875 Limestone, brown and tan, cherty to oolitic, cement contaminated
- 875 - 878 As above
- 878 - 881 Shale, gray (3) Limestone, brown and tan, oolitic to cherty (2)
- 881 - 884 Sandstone, white, fine to medium grain, very silty, tight, with white clay (3)  
Shale, gray (1) Limestone, as above (1) Chert, milky, common
- 884 - 887 Sandstone, white, medium coarse, very silty and tight, with light brown oil stain (4) Shale, gray, as above (1) Chert, milky core. Slight show oil and gas in boiler. Trace pyrite
- 887 - 890 Shale, gray (4) Sandstone, as above (1) limestone, brown, rare
- 890 - 894 Shale, gray, finely micaceous (4) Sandstone, gray, fine to medium, silty (1)  
Slight oil staining and slight show rainbows on pit
- 894 - 898 Shale, gray, dark and light gray, with some tan shale
- 898 - 903 Shale, dark gray and black, carbon, with some siltstone
- 903 - 907 Limestone, brown, oolitic, soft and shaly to finely crystalline, glassy (3)  
shale, gray and brown (2)
- 908 - 910 Shale, light and dark gray (3) Limestone, brown, ostracodal (2)  
Pyrite, common. Limestone, brown, crystalline, common
- 910 - 913 Shale, dark gray, with some green-gray waxy shale and some black carbonaceous shale. Limestone, brown, ostracodal, less than 10%
- 913 - 917 Sandstone, white to gray, friable to tight, with white clay cement clear. Some sandstone, white, coarse, poorly sorted, tight
- 917 - 922 Sandstone, as above, becoming coarser (3) Shale, gray to dark gray (2)  
Limestone, medium gray, lithographic, less than 10%
- 922 - 925 As above, with shale becoming very pyritic. Trace green shale
- 925 - 930 Shale, gray, with some green shale. Trace pyrite and siltstone
- 930 - 935 Shale, grayish-green, soft, with some brown and buff shale.
- 935 - 940 Shale, green and gray, as above (3) Siltstone, gray (2)
- 940 - 944 Shale, medium to dark gray, with some buff shale and some brown shale (4)

Sandstone, white, medium to coarse, tight, slight glauconitic, calcareous (1)

- 944 - 947 Sandstone, white, medium grain, calcareous, with some glauconite and biotite, with pink grains rare, slight oil staining (4) Shale, gray, as above
- 947 - 955 Shale, medium to dark gray (3) Sandstone, white, medium grain, calcareous, with some glauconite and pink grains (2)
- 955 - 965 Shale, brown and gray, with avagonite very common. Trace turritella gastropod (4) Limestone, brown, oolitic (1)
- 965 - 970 Limestone, brown, shaly, ostracodal (3) Shale, gray, waxy, ostracodal to carbonaceous (2) Trace coiled gastropod, avagonite common. Trace ganoid fish scales.
- 970 - 975 Shale, black, carbonaceous, laminated with gilsonite (7) Streaks (3) Limestone, gray, algal, oolitic with medium thin tabular buff avagonite (2) Shale, "oil shale", common
- 975 - 980 Shale, medium to dark gray, avagonite, rare
- 980 - 985 Limestone, buff, shaly, with gray ostracods, strong odor of gas and oil, slight show in boiler
- 985 - 989 Shale, dark gray, with thin sandy stringers, sandstone is gray, fine grain, tight, Limestone, buff, ostracodal, as above less than 10%
- 989 - 992 Limestone, brown, ostracodal, shaly, with brown ostracods. Gastropods and avagonite. Shell fragments, very common (3) Shale, gray (2) Odor gas
- 992 - 996 Shale, brown, and gray (3) Limestone, brown, as above (2) Avagonite, common Trace shale, blue-green
- 996 - 1000 Shale, dark gray, finely micaceous, with brown shale up to 10% (3) Limestone, white, chalky, with dark gray and white ostracods (2) Avagonite and pyrite, rare
- 1000 - 1005 Shale, dark gray and black with some brown shale (4) Limestone, as above (1) Trace limestone, gray, lithographic
- 1005 - 1008 Limestone, ostracodal, as above (4) Shale, gray and brown laminated, "oil shale" (1)
- 1008 - 1012 Limestone, cream to buff, ostracodal, fragmental, soft and chalky, with shale, as above less than 10%
- 1012 - Limestone, buff, oolitic, hard, tight (3) Shale, gray (2)
- 1012- 1020 Limestone, white, algal, with tan ostracods, shale, gray, 10%
- 1020 - 1022 Limestone, white and tan, algal
- 1022 - 1025 Shale, dark gray and brown (3) Limestone, tan, oolitic and white algal (2)
- 1025 - 1030 Limestone, white and tan algal
- 1030 - 1034 Limestone, white, algal, oolitic (4) Shale, gray (1)

- 1034 - 1038 As Above, Few free ostracods and coarse clear quartz grains
- 1038 - 1042 Shale, light and dark gray, avagonite, white irridescent 5%
- 1042 - 1046 Shale, light and dark gray 50%. Limestone, white, chalky, 50%. Avagonite, brown, white, irridescent, very common
- 1046 - 1050 Shale, brown, "oil shale" (2) Shale, gray (1) Limestone, white, as above, (1) Calcite, white, brown and gray, opaque (1)
- 1050 - 1054 Shale, gray and brown, with some gray ostracodal limestone. Trace siltstone, gray, avagonite, very common
- 1054 - 1058 Shale, gray, with some gray ostracodal shale.
- 1058 - 1063 Shale, gray. Ostracodal, with white clayey shale, common.
- 1063 - 1070 Shale, as above, with white shale increasing to 25%. Limestone, dark brown, finely crystalline 5%
- 1070 - 1075 Shale, light gray, waxy, pyritic, clayey.
- 1075 - 1080 Shale, medium gray with green cast. Pyrite very common. Limestone, light gray, dense, rare
- 1080 - 1090 Shale, light grayish-green with trace tan limestone, flat
- 1090 - 1105 Shale, light green and red, mottled, Trace pyrite, with some pyrite in clusters (First Red)
- 1105 - 1130 Shale, gray and dark maroon, with some dark green shale. Cement contaminated in at 1115.
- 1130 - 1135 Shale, purple and maroon, with some green and gray shale. Trace pyrite
- 1135 - 1145 As above with increasing of yellow shale
- 1145 - 1150 Shale, purple, gray, green and mottled
- 1150 - 1160 As above with trace limestone, brown
- 1160 - 1170 As Above with some sandstone, coarse grain, shaly, tight
- 1170 - 1180 Shale, as above (3) Sandstone, as above (2)
- 1180 - 1190 Shale, gray and green, 50% sandstone, coarse grain, friable, frosted, with white lime binder with trace pyrite and glauconite 50%. Trace limestone, brown
- 1190 - 1212 Sandstone, coarse grain, as above, with pink, red and gray chert, loose, friable, silty, pyrite common.